

WHAT IS CLAIMED IS:

1 1. A self-contained, portable music player comprising:
2 a rechargeable battery pack for powering the music
3 player;
4 an input/output device including at least a keypad for
5 receiving user inputs and a display;
6 a memory capable of storing digital music in at least one
7 compressed digital format;
8 a data processor connected to said input/output device
9 and said memory, said data processor programmed to decompress
10 said digital music into uncompressed digital music samples;
11 an audio coder-decoder connected to said connected to
12 said data processor for receiving said uncompressed digital
13 music samples from said data processor and converting said
14 uncompressed digital music samples into analog music;
15 a headset connector connected to said audio coder-decoder
16 for supplying said analog music to an external headset
17 earphone; and
18 a base connector including
19 a power connection connected to said rechargeable
20 battery pack capable of receiving charging power from an
21 external base unit, and
22 an analog output connection connected to said audio
23 coder-decoder for supplying said analog music to an
24 external base unit for amplification and reproduction via
25 speakers;
26 wherein the self-contained, portable music player
27 operates in

28 a portable mode disconnected from a base unit and
29 powered by said rechargeable battery pack, wherein a user
30 may listen to selected digital music stored in said
31 memory via an external headset earphone, and
32 in a base mode connected to a base unit via said
33 base connector and powered via said power connector,
34 wherein a user may listen to selected digital music
35 stored in said memory via speakers of an external base
36 unit.

1 2. The self-contained, portable music player of claim 1,
2 wherein:

3 said data processor is further programmed in cooperation
4 with input/output device said whereby a user may enter volume
5 control data via said keypad; and

6 said base connector further includes a volume data
7 connection for transmission of volume control data from the
8 self-contained, portable music player to an external base
9 unit.

1 3. The self-contained, portable music player of claim 1,
2 wherein:

3 said base connector further includes a set of digital
4 connections connected to said data processor and said audio
5 coder-decoder for bi-directional transmission of digital data
6 with an external base unit.

1 4. The self-contained, portable music player of claim 1,
2 further comprising:

3 an infrared transmission interface connected to said data
4 processor for bi-directional transmission of digital data with
5 an external base unit.

1 5. The self-contained, portable music player of claim 1,
2 further comprising:

3 a microphone;

4 a pre-amplifier having an input connected to said
5 microphone and an output connected to said audio coder-
6 decoder;

7 wherein said audio coder-decoder digitizes sound received
8 by said microphone, said data processor programmed to store
9 said digitized sounds in said memory.

1 6. The self-contained, portable music player of claim 5,
2 wherein:

3 said data processor is further programmed to compress
4 said digitized sounds into a compressed digital format and
5 store said compressed digital format in said memory.

1 7. The self-contained, portable music player of claim 5,
2 wherein:

3 said data processor is further programmed to
4 recall digitized sounds stored in said memory, and
5 compress said recalled digitized sounds into a
6 compressed digital format and store said compressed
7 digital format in said memory.

1 8. The self-contained, portable music player of claim 1,
2 wherein:

3 said base connector further includes an analog input
4 connection connected to said audio coder-decoder for receiving
5 an analog input from an external base unit; and

6 wherein said audio coder-decoder digitizes analog input
7 received via said analog input connection, said data processor
8 programmed to store said digitized analog input in said
9 memory.

1 9. The self-contained, portable music player of claim 8,
2 wherein:

3 said data processor is further programmed to compress
4 said digitized analog input into a compressed digital format
5 and store said compressed digital format in said memory.

1 10. The self-contained, portable music player of claim
2 8, wherein:

3 said data processor is further programmed to
4 recall digitized analog input stored in said
5 memory, and

6 compress said recalled digitized analog input into
7 a compressed digital format and store said compressed
8 digital format in said memory.

1 11. The self-contained, portable music player of claim
2 1, wherein:

3 said memory is a non-volatile memory capable of retaining
4 data in the absence of electric power.

1 12. The self-contained, portable music player of claim
2 1, wherein:

3 said data processor is a digital signal processor.

1 13. A music system comprising:

2 a self-contained, portable music player including

3 a rechargeable battery pack for powering the music
4 player,

5 an input/output device including at least a keypad
6 for receiving user inputs and a display;

7 a memory capable of storing digital music in at
8 least one compressed digital format,

9 a data processor connected to said input/output
10 device and said memory, said data processor programmed to
11 decompress said digital music into uncompressed digital
12 music samples,

13 an audio coder-decoder connected to said connected
14 to said data processor for receiving said uncompressed
15 digital music samples from said data processor and
16 converting said uncompressed digital music samples into
17 analog music,

18 a headset connector connected to said audio coder-
19 decoder for supplying said analog music to an external
20 headset earphone, and

21 a first base connector including

22 a first power connection connected to said
23 rechargeable battery pack capable of receiving
24 charging power from an external base unit, and

25 a player analog output connection connected to
26 said audio coder-decoder for supplying said analog
27 music; and
28 a base unit including
29 a second base connector including
30 a second power connection for connection to
31 said first power connection,
32 an analog input connection for connection to
33 said analog output connection,
34 a power source connected to said second power
35 connection for supplying recharging power for said
36 rechargeable battery pack;
37 a pre-amplifier having an input connected to said
38 analog input connection and an output,
39 a power amplifier having an input connected to said
40 output of said pre-amplifier and an output, and
41 a speaker system connected to said output of said
42 power amplifier for reproducing sound corresponding to
43 said output of said power amplifier,
44 wherein the music system operates in
45 a portable mode wherein said self-contained,
46 portable music player is disconnected from said base unit
47 and powered by said rechargeable battery pack, wherein a
48 user may listen to selected digital music stored in said
49 memory via an external headset earphone, and
50 in a base mode wherein said self-contained,
51 portable music player is connected to said base unit via
52 said first base connector and said second base connector
53 and powered from said power source, wherein a user may

54 listen to selected digital music stored in said memory
55 via speakers of an external base unit.

1 14. The music system of claim 13, wherein:
2 said data processor is further programmed in cooperation
3 with input/output device said whereby a user may enter volume
4 control data via said keypad;
5 said first base connector further includes a volume data
6 output connection for transmission of volume control data from
7 the self-contained, portable music player;
8 said second base connector further includes a volume data
9 input connection for connection to said volume data output
10 connection; and
11 said pre-amplifier is further connected to said volume
12 data input connection and producing an amount of amplification
13 corresponding thereto.

1 15. The music system of claim 13, wherein:
2 said first base connector further includes a set of first
3 digital connections connected to said data processor and said
4 audio coder-decoder for bi-directional transmission of digital
5 data with an external base unit;
6 said second base connector further includes a set of
7 second digital connections for connection to said set of first
8 digital connections; and
9 said base unit further includes a disc drive connected to
10 said set of second digital connections of said second base
11 connector capable of storing and recalling digital data.

1 16. The music system of claim 13, further comprising:
2 an infrared transmission interface connected to said data
3 processor for bi-directional transmission of digital data with
4 an external base unit.

1 17. The music system of claim 1, further comprising:
2 a microphone;
3 a pre-amplifier having an input connected to said
4 microphone and an output connected to said audio coder-
5 decoder;
6 wherein said audio coder-decoder digitizes sound received
7 by said microphone, said data processor programmed to store
8 said digitized sounds in said memory.

1 18. The music system of claim 17, wherein:
2 said data processor is further programmed to compress
3 said digitized sounds into a compressed digital format and
4 store said compressed digital format in said memory.

1 19. The music system of claim 17, wherein:
2 said data processor is further programmed to
3 recall digitized sounds stored in said memory, and
4 compress said recalled digitized sounds into a
5 compressed digital format and store said compressed
6 digital format in said memory.

1 20. The music system of claim 13, wherein:
2 said base unit further includes a tuner for receiving and
3 demodulating analog audio signals;

4 said first base connector further includes a base unit
5 analog output connection

6 said first base connector further includes a player
7 analog input connection connected to said audio coder-decoder
8 for receiving an analog input from said base unit;

9 wherein said audio coder-decoder digitizes analog input
10 received via said player analog input connection, said data
11 processor programmed to store said digitized analog input in
12 said memory.

1 21. The music system of claim 20, wherein:
2 said data processor is further programmed to compress
3 said digitized analog input into a compressed digital format
4 and store said compressed digital format in said memory.

1 22. The music system of claim 20, wherein:
2 said data processor is further programmed to
3 recall digitized analog input stored in said
4 memory, and
5 compress said recalled digitized analog input into
6 a compressed digital format and store said compressed
7 digital format in said memory.

1 23. The music system of claim 13, wherein:
2 said memory is a non-volatile memory capable of retaining
3 data in the absence of electric power.

1 24. The music system of claim 13, wherein:
2 said data processor is a digital signal processor.

1 25. A base unit for use with a self-contained, portable
2 music player comprising:
3 a base connector including
4 a power connection,
5 an analog input connection for receiving an analog
6 input;
7 a power source connected to said power connection for
8 supplying recharging power for the self-contained, portable
9 music player;
10 a pre-amplifier having an input connected to said analog
11 input connection and an output,
12 a power amplifier having an input connected to said
13 output of said pre-amplifier and an output, and
14 a speaker system connected to said output of said power
15 amplifier for reproducing sound corresponding to said output
16 of said power amplifier.

1 26. The base unit of claim 25, wherein:
2 said base connector further includes a volume data input
3 connection for receiving of volume control data from the
4 self-contained, portable music player;
5 said pre-amplifier is further connected to said volume
6 data input connection and producing an amount of amplification
7 corresponding thereto.

1 27. The base unit of claim 25, wherein:
2 said base connector further includes a set of digital
3 connections for connection to a set of digital connections of
4 the self-contained, portable music player; and

5 said base unit further includes a disc drive connected to
6 said digital connections of said base connector capable of
7 storing and recalling digital data.

1 28. The music system of claim 26, further comprising:
2 a tuner for receiving and demodulating analog audio
3 signals;

4 said base connector further includes a base unit analog
5 output connection connected to output said analog audio
6 signals.